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(71)Applicant : **FUJITSU LTD**

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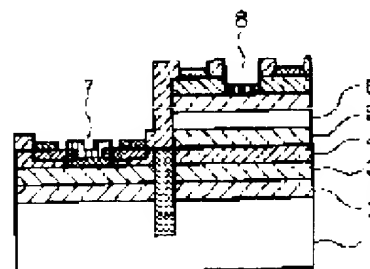
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(54) SEMICONDUCTOR DEVICE AND ITS MANUFACTURE

(57)Abstract:

PURPOSE: To obtain a high-performance complementary semiconductor circuit device having a higher-speed characteristic than a silicon complementary circuit device, by simple manufacturing processes and with good reproducibility.

CONSTITUTION: A graded Si1-xGex layer 2 having an increasing Ge composition, an active layer 3 composed mainly of germanium, and a graded Si1-yGe_y layer 4 having a reducing Ge composition are provided on a silicon germanium substrate 1, and in its one part region a p-type transistor 7 having a silicon germanium active layer 3 as a channel layer is formed. Along with it, in an adjacent region an n-type transistor 8 is formed in a III-V compound semiconductor active layer 6 provided through the medium of a high-resistance III-V compound semiconductor layer 5.



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